BUTAKOV, Ye.A.; ZAKREVSKIY, A.D.

Minimization of the number of states of a switching circuit using the "Ural" universal digital computer. Probl.pered. inform. no.11:66-76 '62. (MIRA 16:1)

(Electronic digital computers)
(Electric relays) (Switching theory)

S/103/62/023/011/004/007
D201/D308

AUTHOR: Zakrevskiy, A.D. (Tomsk)

TITLE: Theory of linear networks for binary sequence conversion

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 11, 1962, 1492 - 1496

TEXT: The author considers a class of linear networks transforming the binary sequence

$$x \equiv x_0 x_1 \ldots x_{n-1} (x_i \in \{0, 1\}),$$

which include the networks performing the following operations: addition with the modulus 2, shift, integration and differentiation (as an operation inverse to integration). For this class of transforming networks the proof is given of 12 theorems which determine the relationships between the respective network operators and which represent the rules of functional-equivalent transformations carried out by the circuits of the above class. The notion $\Delta\partial$ - and Δd-

Card 1/2

Theory of linear networks for ... S/103/62/023/011/004/007
D201/D308

canonical forms of the network operator is introduced and the matrix operator of the mutual transformation of the above forms is determined.

SUBMITTED: June 6, 1962

Card 2/2

ACCESSION NR: AR4039317 S/0044/64/000/003/V085/V085

SOURCE: Ref. zh. Matematika, Abs. 3V481

AUTHOR: Gruzdev, G. P.; Zakrevskiy, A. D.; Zakharov, V. V.

TITLE: A programming program for the machine "Ural-1"

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 3-8

TOPIC TAGS: programming program, Ural-1, Strelas BESM, program scheme language variant, argument index, arithmetic operation, code 30A command, parameter algorithm, nucleus

TRANSLATION: The authors discuss certain advantages of the programming program (PP), indicated in the title, compared to analogous operations for computers of the "Strela" type and the BESM. The program translates an algorithm, written on one of the variants of the language of program schemes, into the working program. Formulas are represented in the form of a parenthesis-free entry with an index of the arguments under an arithmetic operation. A general scheme for the PP is cited.

Card 1/2

ACCESSION NR: AR4039317

The author indicates the advantages of using the new command with code 30A, situated in the nucleus K, for obtaining address variables in the presence of algorithms of parameters. The contents of the nucleus with address A is added to the contents of the nucleus K+1, and the result is sent into the register of commands for fulfillment at the next instant of time. A. Krasilov.

DATE ACQ: 22Apr64 SUB CODE: MA ENCL: 00

Card 2/2

ACCESSION NR: AR4039315 S/0044/64/000/003/V057/V057

SOURCE: Ref. zh. Matematika, Abs. 3V251

AUTHOR: Zakrevskiy, A D.

TITLE: A universal system for solving problems on the type of synthesis of relay schemes

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 9-37

TOPIC TAGS: relay scheme synthesis, UTsVM electronic prefix, L-machine, L-system L-command, multidimensional field unit, control unit, Boolean function, information field, base field, auxiliary field

TRANSLATION: The author describes an electronic prefix to the UTsVM which significantly increases the speed of solving problems on the synthesis of relay schemes in comparison with the speed achieved in the usual application of the UTsVM. This prefix is called an L-machine, and the system in total is called an L-system. A program for an L-system includes commands for the UTsVM and L-commands realizable

Card 1/2

ACCESSION NR: AR4039315

by means of the L-machine. The interchange of information between the UTsVM and the L-machine is programmed by L-commands. Preliminary calculations show that the structure of the system of agreement of the L-machine with the UTsVM constructively constitutes not more than 10% of the structure of the L-machine. The L-machine consists of 2-x units: the multidimensional field unit (m.f.u.) and the control unit (c.u.). The m.f.u. serves the purpose of storing Boolean functions and contains 14 "ten-dimensional" information fields. Each field contains 1024 elements; the informational capacity of each element constitutes 1 bit. One of the fields is called the base (field); its elements represent the vertices of a ten-dimensional cube and the elements, corresponding to neighboring vertices of the cube, have a directly controllable relation. The remaining fields are called auxiliary (fields). The elements of auxiliary fields are not directly related to each other and have a direct relation only with those elements of the base field which possess the same coordinates. The author describes operations which can be carried out by the L-machine. Examples are cited from the theory of relay schemes, whose solution is accelerated by at least 100 times with the application of the proposed prefix. V. Marty*nyuk.

DATE ACQ: 22Apr64 SUB CODE: MA ENCL: 00

Card 2/2

ACCESSION NR: AP4015291 S/0280/64/000/001/0039/0049

AUTHOR: Butakov, Ye. A. (Tomsk); Zakrevskiy, A. D. (Tomsk)

TITLE: Some problems in realization of Boolean functions with threshold elements. Part I

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 39-49

TOPIC TAGS: Boolean algebra, Boolean function, threshold element Boolean function, 10 variables Boolean function, logical design, Boolean function realization

ABSTRACT: A method of realizing a Boolean function with one threshold element is considered; the method is based on the possibility, in the case of a threshold function, of attaining linear ordering of the set of weights of variables. The problem is solved by the method of successive approximations. Since a decision is to be made in each step as to which weights are to be increased, the final

Card 1/2

ACCESSION NR: AP4015291

decision substantially depends on the correctness of the intermediate selections. If the number of variables is small, the first step may approach the final result so closely that no branching arises in making decisions in further steps. However, with ten or more variables, a reconsideration of the variants may prove necessary. No proof is offered as to the convergence of this iterative process; however, it is claimed that "in trying all (504) types of functions of six or less variables on a digital computer, the method always yielded a minimum integral solution." The method permits a generalization in the case of incompletely determined Boolean functions. Orig. art. has: 9 figures and 25 formulas.

ASSOCIATION: none

SUBMITTED: 08Apr63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: MM, IE NO REF SOV: 006 OTHER: 006

Card 2/2

ACCESSION NR: AP4024477 S/0141/64/007/001/0166/0174

AUTHOR: Zakrevskiy, A. D.

TITLE: Shortening of trial runs in the solution of some problems in the synthesis of discrete automata

SOURCE: IVUZ. Radiofizika, v. 7, no. 1, 1964, 166-174

TOPIC TAGS: discrete automaton, synthesis of automaton, trial run, trial run shortening, trial run algorithm, Boolean matrix, Boolean matrix transformation, Quine table transformation, threshold element analysis

ABSTRACT: A procedure is developed for minimizing the number of trials by programming the trial runs on a universal computer. Among the discrete-automaton synthesis problems considered are the analysis of a threshold element and the transformation of the Quine table. An algorithm based on one of the methods considered in the

Card 1/2

ACCESSION NR: AP4024477

article is proposed for the transformation of a Boolean matrix. The best known interpretation of this transformation is the transition from the set of simple implicants of a Boolean function to the set of its impassable disjunctive normal forms. Orig. art. has: 26 formulas and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut (Siberian Physicotechnical Scientific Research Institute)

SUBMITTED: 07May63 DATE ACQ: 15Apr64 ENC: 00

SUB CODE: MM NR REF SOV: 001 OTHER: 005

Card 2/2

ZAKREVSKIY, A.D.

Solution of systems of logical equations. Probl. pered. inform. no.17:48-55 '64. (MIRA 17:11)

ACC NR: AR6026537 SOURCE CODE: UR/0372/66/000/004/G052/G052

AUTHOR: Zakrevskiy, A. D.

TITLE: Automated synthesis of digital automata on the basis of the LYAPAS algorithmic language

SOURCE: Ref. zh. Kibernetika, Abs. 4G362

REF SOURCE: Sb. Vychisl. sistemy, Vyp. 18. Novosibirsk, 1965, 5-33

TOPIC TAGS: machine language, algorithmic language, computer language, automaton / ~~LYAPAS logic language for automaton synthesis algorithms~~

ABSTRACT: The principal results of research and development work on the LYAPAS language (logic language for automaton-synthesis algorithms) are presented. Two levels of the LYAPAS language are created. The first level is closer to the present-day computer languages. At this level, designed to represent the detailed structure of the algorithms, programs with a volume equivalent to 200-300 machine instructions can readily be directly compiled. At the second level programs with a complex hierarchic structure are represented. A detailed description of the first level of LYAPAS is given. The methods of compiling programs in the LYAPAS language

Card 1/2 UDC: 62-506:681.142:62

ACC NR: AR6026537

are described. The chief differences between LYAPAS and programming languages of the FORTRAN and ALGOL-60 types are pointed out. Ways of automating the synthesis and prospects for further developing the LYAPAS language are discussed. Bibliography of 18 titles. G. Ya. [Translation of abstract]

SUB CODE: 09, 12

Card 2/2

ACC NR: AR6024043 SOURCE CODE: UR/0044/66/000/004/V022/V022

AUTHOR: Zakrevskiy, A. D.

TITLE: Algorithms for the transformation of transition tables removing the contest conditions

SOURCE: Ref. zh. Matematika, Abs. 4V113

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 48-55

TOPIC TAGS: algorithm, coding, Boolean algebra, machine algorithm

ABSTRACT: Some results of investigations aiming at production of machine algorithms for the solution of numerous problems of the transformation of matrices describing relay device transitions have been presented. Among the problems are 1) the analysis of the feasibility of the transformation of a given matrix into an equivalent stable matrix (Coldwell, S., Logical synthesis of relay devices, IL, M., 1962) without an increase in the number of states; 2) the determination of the characteristics of transformation if it is possible; and 3) the determination of the ways for the establishment of a stable matrix equivalent to the given one with a minimum addition of the number of states, with a nimimum number of binary variables utilized for the coding of the states, or with a matrix of maximum speed. The proposed algorithms in their totality solve the problem of optimization of Boolean coding of the graph of the

Card 1/2 UDC: 519.95

ACC NR: AR6024043

transitions of arbitrary relay schemes. Algorithms are well presentable on the LYaPAS language permitting the determination, by experimental means, of certain quantitative characteristics of algorithms. [Translation of abstract]

SUB CODE: 12

Card 2/2

ACC NR: AR6026534 SOURCE CODE: UR/0372/66/000/004/G041/G041

AUTHOR: Zakrevskiy, A. D.

TITLE: Realization of random events with a given probability

SOURCE: Ref. zh. Kibernetika, Abs. 4G281

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 56-59

TOPIC TAGS: probability, random process, statistic analysis, Boolean algebra

ABSTRACT: Two methods of computerized realization of random variables with the aid of Boolean algebra are considered. Given the existence of a series of uncorrelated sources of events ξ_1 which assume the values of 0 and 1 with equal probability, the numbers $x = [\xi_1, \xi_2 \ldots \xi_n]$ are uniformly distributed over the segment [0, 1] and determined correct to 2^{-n}. The same method may be used to organize an event with any given probability p(y), putting $p(y) = p(y > x)$. In certain cases another method of realization is more convenient. If a m-bit computer contains the described random event generator and the problem is to determine the n-bit binary code z for the k-th event, and if the values of 1 adopted by the individual bits are mutually independent and have the probability $y = [\sigma_1\sigma_2 \ldots \sigma_m]$, this code z can be obtained

Card 1/2 UDC: 519.82/.83

ACC NR: AR6026534

by means of n utilizations of the random event generator with the aid of the theorem: if $p(\eta) = y$ and $y\,[\sigma_1\sigma_2\ldots\sigma_n]$ then

$$p(\eta) = p((\ldots((0 \oplus^{\sigma_n} \xi_n) \oplus^{\sigma_{n-1}} \xi_{n-1}) \oplus^{\sigma_{n-2}} \ldots) \oplus^{\sigma_1} \xi_1 = 1),$$

where $\oplus^0 = \wedge$, $\oplus^1 = \vee$. A theoretically numerical interpretation of the methods proposed above is considered. The question of a min. system of basic binary events for the realization of any random variable η with an arbitrary probability $p(\eta)$ and a given degree of accuracy is explored. A. G. [Translation of abstract]

SUB CODE: 12, 09, [illegible]

Card 2/2

L 04425-67 EWT(1) GG/GD

ACC NR: AT6014294 SOURCE CODE: UR/0000/65/000/000/0346/0356

AUTHOR: Zakrevskiy, A. D. (SSSR)

45
B+1

ORG: none

TITLE: Machine for solving logic problems of relay-network-synthesis type

SOURCE: International Symposium on the Theory of Relay Systems and Finite Automata. Moscow, 1962. Sintez releynykh struktur (Synthesis of relay structures); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 346-356

TOPIC TAGS: logic circuit, logic design, switching theory, digital computer

ABSTRACT: A machine concept for switching problems has been developed at the Tomsk University which consists of a general-purpose computer plus an "L-machine," which allows the former to carry out additional operations important in Boolean minimization problems. The system operation is once more explained (see author's article in Tr. Sib. fiz.-tekhn. in-ta, 1962). Three types of L-machine operations are distinguished: (1) The ρ -operation which is

Card 1/2

L 04425-67

ACC NR: AT6014294

equivalent to a two-position operation on a 10-argument Boolean function; (2) The ν-operation which is an information exchange between the principal field A and the digital-computer storage; it also covers some more complex A-field operations; (3) The λ-operation which is realized according to a subroutine taken from the computer storage and expressed in the language of U-, μ-, or ν-operation. Examples of the above operations are illustrated graphically. Simulation of the L-system on a general-purpose computer corroborated the L-system advantages which are claimed to be: simple programing and quicker solutions. Orig. art. has: 11 figures and 17 formulas.

SUB CODE: 09 / SUBM DATE: 27Aug65 / ORIG REF: 006 / OTH REF: 003

awm

Card 2/2

L 05285-67 EWT(d)/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6022674 SOURCE CODE: UR/0000/66/000/000/0067/0072

AUTHOR: Zakrevskiy, A. D.; Toropov, N. R.

46
B+1

ORG: none

TITLE: Teaching pattern recognition in Boolean space

SOURCE: Moscow, Institut avtomatiki i telemekhaniki. Samoobuchayushchiyesya avtomaticheskiye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 67-72

TOPIC TAGS: pattern recognition, Boolean space, automatic machine teaching, algorithm

ABSTRACT: As one of the ways of solving the problem of pattern recognition and teaching of pattern recognition deserving of attention, the authors investigate appropriate models in Boolean space. The following is assumed as a working hypothesis: the pattern is a Boolean function having a sufficiently simple disjunctive form, i.e., with a small number of low-rank conjunctions. In this case it becomes possible to teach pattern recognition on the basis of relatively short teaching sequences, the length of which is appreciably less than the power of the set. Under these conditions effective algorithms of teaching pattern recognition are constructed on the basis of methods of minimizing weakly determined Boolean functions. For example, the use of the following principle is reasonable: for a given teaching sequence of

Card 1/2

L 05285-67

ACC NR: AT6022674

fixed length it is assumed that the pattern corresponds to a Boolean function having the simplest disjunctive form (minimal or briefest) and taking from the elements of the teaching sequence the values prescribed by this sequence. By increasing the fixed length and forming a corresponding sequence of Boolean functions it is possible to expect that with a sufficiently simple pattern this sequence will converge at a certain limit corresponding to the pattern sought. Orig. art. has: 5 figures.

SUB CODE: 05, 09/ SUBM DATE: 02Mar66/ ORIG REF: 003/ OTH REF: 002

Card 2/2 egh

L 54565-65 EWT(d)/T LJP(c)

ACCESSION NR: AP5012794 UR/0378/65/000/002/0053/0060
512.932-591.95

AUTHOR: Zakrevskiy, A. D.

TITLE: Minimization algorithms of weakly defined Boolean functions

SOURCE: Kibernetika, no. 2, 1965, 53-60

TOPIC TAGS: Boolean function minimization, weakly defined Boolean function, minimization algorithm

ABSTRACT: The author investigates the search for the minimum or shortest disjunctive normal forms of Boolean functions of a large number of variables which are defined over a small portion of the Boolean space. On the basis of 24 theorems, two algorithms are proposed for minimizing the so-called weakly defined functions. Algorithms are presented in a form suitable for machine programming. Orig. art. has: 25 formulas and 3 tables.

ASSOCIATION: None

SUBMITTED: 06Sep64 ENCL: 00 SUB CODE: DP,MA

NO REF SOV: 002 OTHER: 007

Card 1/1 gs

L 38597-65 EWT(d)/T IJP(c)

ACCESSION NR: AR5006746 S/0044/64/000/012/V042/V042

16
B

SOURCE: Ref. zh. Matematika, Abs. 12V230

AUTHOR: Zakrevskiy, A. D.

TITLE: Algorithm for the partition of Boolean functions 16

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 44, 1964, 5-16

TOPIC TAGS: Boolean function, algorithm, partition algorithm, minimization

TRANSLATION: A Boolean function $f(x_1, \ldots x_n)$ is called functially partitioned if it can be represented in the form $\varphi(u_1, u_2, \ldots, u_p, \psi(v_1, v_2, \ldots, v_q))$, where $\{u_i\} \cup \{v_j\} = \{x_k\}$

and [illegible] $\{u_i\} \cup \{v_j\}$ [illegible]

is functionally quasi-partitioned if it can be represented in the form $\varphi(u_1, u_2, \ldots, u_p; w_1, w_2, \ldots w_s, \psi(w_1, w_2, \ldots, w_s, v_1, v_2, \ldots, v_q))$, where $\{u_i\} \cup \{w_r\} \cup \{v_j\} = \{x_k\}$, $\{u_i\} \cap \{w_r\} = \{u_i\} \cap \{v_j\} = \{v_j\} \cap \{w_r\} = \Lambda$

and $q > 2$, $p > 1$. Setting $\{u_i\} = A$, $\{v_j\} = B$, $\{x_k\} = X$;

Card 1/2

L 38597-65

ACCESSION NR: AR5006746

we get the result: A function f(x) is partitioned by the partition A/B if it is representable in the form $f(X)=\varphi(A, C, \psi(C, B))$.

A criterion of the partitionability of a function f by the partion A/B is formulated, convenient for practical use. An algorithm for the location of partition of a Boolean function is indicated, which seems optimal in a certain sense (connected with the minimization of a function $2^{1-\varepsilon(B)}+2^{-\varepsilon(A)}$, where $\varepsilon(N)$ is the cardinality of the set N.) It is confirmed that the described method can be extended to the case of a Boolean function not everywhere determined. A. Muchnik

ENCL: 00 SUB CODE: MA

Card 2/2

L 41274-65

ACCESSION NR: AR5006747 S/0044/64/000/012/V042/V043

2
B

SOURCE: Ref. zh. Matematika, Abs. 12V232

AUTHOR: Zakrevskiy, A.D.

TITLE: The synthesis of schemes using majorized elements

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te. vyp. 44, 1964, 17--23

TOPIC TAGS: scheme synthesis, Boolean function, partition, Psi partition, majorized element

TRANSLATION: In connection with the problem of synthesizing schemes from majorized elements, realizing the function $\psi(a, b, c) = ab + ac + bc$, the question of the Ψ-partition of a Boolean function is investigated. The function f(x) is called Ψ- partitioned with respect to the triad (A, B, C) where $x = \{x_1, \ldots x_n\}$, and A, B, C are non-empty subsets) if there are certain functions f_1, f_2, f_3 such that $f(X) = \psi(f_1(X \setminus A), f_2(X \setminus B), f_3(X \setminus C))$.

Necessary and sufficient conditions are established for the partitionability of the function f(x) with respect to (A, B, C). The case when the sets A, B and C consist of a single element is finally investigated and the following theorem is proven: The Boolean

Card 1/2

L 41274-65

ACCESSION NR: AR5006747

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function f(x) is partitionable with respect to the triad $\{x, y, z\}$ if and only if each of the coefficients $\Psi_i(x, y, z)$ of the partitioned function with respect to the remaining variables can be represented in the form

$$\varphi_i(x, y, z) = \psi(\varphi_i^f(x, y), \varphi_i^f(x, z), \varphi_i^f(y, z)).$$

It is established that of 22 types of Boolean functions, of three variables, only 18 types satisfy the partition (1) (some being satisfied in many ways). Another criterion for Ψ-portitionability is the requirement that

$$(\varphi \Delta N_x \varphi) + (\varphi \Delta N_y \varphi) + (\varphi \Delta N_z \varphi) = 0,$$

where $\varphi = (f \Delta N_x f) \cdot (f \Delta N_y f) \cdot (f \Delta N_z f)$, Δ is an addition operator in mod 2, and Na is the inversion operator for the variable a. It is shown that for an optimal (in the sense of complex schemes) Ψ-partition of the function f(x) with respect to the triad (x, y, z), it is desirable to choose a variant for which the Ψ- partitions of the functions Ψ i (x, y, z) are as uniform as possible. A Muchnik

ENCL: 00 SUB CODE: DP

Card 2/2

ZAKREVSKIY, A.D. (Tomsk)

Functional stability of switching circuits in respect to false shut. Avtom. i telem. 25 no.9:1336-1343 S '64.

(MIRA 17:10)

L 38593-65 EEO-2/EWT(d)/EEC-4/EED-2

ACCESSION NR: AR5006744 S/0044/64/000/012/V037/V037

SOURCE: Ref. zh. Matematika, Abs. 12V199

AUTHOR: Zakrevskiy, A.D.; Tarasenko, F.P.

TITLE: Investigation of an interference-resistant wireless receiver with statistical self-adjustment of the useful signal for the reception of double Markov signals of k-th order in Gaussian noise

CITED SOURCE: Ref. zh. Matematika, Abs. 12V199

TOPIC TAGS: receiver, Markov chain, Markov process, signal reception, noise, Gaussian noise, self adjusting system

TRANSLATION: A receiver of double Markov signals of the k-th order is investigated, when the conditional probability distributions $p(a_n = 0 | a_{n-1}, \ldots a_{n-k})$, determining the statistical properties of the signal sequence, are unknown and are determined in the process of reception; a_n is the n-th double symbol. In this case, for an estimate of the quantity p, the mean frequency of the occurrence of zero among the symbols $a_{n-1}, \ldots, a_{n-k}$ in a received sequence is derived. If the symbol 0 is realized, the estimate for the probability p is increased by $\varepsilon(1-p)$; in the opposite case it is decreased by εp. The

Card 1/2

L 38598-65
ACCESSION NR: AR5006744

quantity δ determines the mobility of the estimate of p. The level of quantization of the received signal appears optimal according to the information possessed at the given moment about the statistics of the received signal. Thus, an inverse loop is created. The characteristics of a system were determined with the aid of the "Ural" computer. The dependence of errors of the first and second orders on the length of the received sequence was calculated for various values of δ, signal to noise ratio and k. The indicated comparison was carried out with respect to perturbation-stabilizing systems connected with a system not depending on a statistical connection between symbols. The problem of the technical realization of such a system is discussed.

ENCL: 00 SUB CODE: MA, EC

Card 2/2

ACC NR: AR6026518 SOURCE CODE: UR/0372/66/000/004/V022/V022

AUTHOR: Zakrevskiy, A. D.

TITLE: Transition-table conversion algorithms which eliminate contest conditions

SOURCE: Ref. zh. Kibernetika, Abs. 4V113

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 48-55

TOPIC TAGS: algorithm, mathematic matrix, computer coding, logic design

ABSTRACT: Certain findings of research and development work on machine algorithms intended to solve various problems of the conversion of the transition matrices of a relay system are presented. The problems considered are: 1) analysis of the possibility of converting a given matrix to its equivalent stable matrix (Kolduell [Caldwell], S. Logicheskiy sintez releynykh ustroystv. IL, M., 1962) without increasing the number of states; 2) determination of the nature of conversion, if possible; 3) determination of the methods of deriving a stable matrix equivalent to the concerned matrix, with a minimum increase in number of states and a minimum number of binary variables used to code the states, or of a matrix with a maximum rapidity of action. The proposed algorithms as a whole solve the problem of optimizing the

Card 1/2 UDC: 519.95

ACC NR: AR6026518

Boolean coding of the transition graph of an arbitrary relay network. The algorithms can be satisfactorily presented in LYAPAS language, which makes possible the experimental determination of certain quantitative features of algorithms. [Translation of abstract]

SUB CODE: 09, 12

Card 2/2

L 24932-65
ACCESSION NR: AP4045346 S/0103/64/025/009/1336/1343

AUTHOR: Zakrevskiy, A. D. (Tomsk)

13
B

TITLE: Functional stability of contact circuits to false closures

SOURCE: Avtomatika i telemekhanika, v. 25, no. 9, 1964, 1336-1343

TOPIC TAGS: contact circuit, automatic control

ABSTRACT: Circuits that realize an incompletely definite Boolean function $\tilde{f}$ can be synthesized at a considerably reduced number of contacts (as compared to the well-known Moore and Shannon method). A contact 2-pole network realizing the Boolean function $\tilde{f}(x_1, x_2, \ldots, x_n)$ is defined, in the general case, not within the entire space M of binary variables $x_1, x_2 \ldots, x_n$; such an incompletely definite function is defined by breaking up set M into three subsets. The occurrence of a fault (undesirable closing of contacts) is regarded as a transition of the circuit into another state in which it will realize a function f', not f. However, if the

Card 1/2

L 24932-65
ACCESSION NR: AP4045346

boundaries of f_{max} and f_{min} are not violated, i.e., $f_{min} \leq f \leq f_{max}$ holds true, the circuit will still realize the original function f. Hence, insofar as the above condition is met, the fault may be tolerated. Orig. art. has: 3 figures and 37 formulas.

ASSOCIATION: none

SUBMITTED: 27Mar63 ENCL: 00

SUB CODE: DP, IE NO REF SOV: 001 OTHER: 002

Card 2/2

L 26048-65 EWT(d)/T Ph-4 IJP(c)

ACCESSION NR: AT5001700 S/2945/64/000/017/0048/0055

AUTHOR: Zakrevskiy, A. D.

TITLE: The solution of a system of logic equations

SOURCE: AN SSSR. Institut problem peredachi informatsii. Problemy peredachi informatsii, no. 17, 1964. Printsipy postroyeniya setey i sistem upravleniya (Principles of network construction and control systems), 48-55

TOPIC TAGS: boolean space, boolean function, algorithm, conjunction, disjunction, propositional logic, disjunctive normal form

ABSTRACT: One special form of auxiliary constraint of a system of logic equations is considered, namely, a system of m Boolean equations each of which depends only on k variables, where k is sufficiently small (e.g., k = 1 to 6). In connection with such a calculation, the effectiveness of the method given in the article increases strongly with a decrease in k. Roots are sought to the system of Boolean functions:

$$f_i(Y_i) = 1, \quad i = 1, 2, \ldots, m, \qquad (1)$$

where $Y_i \subseteq X = \{x_1, x_2, \ldots, x_n\}$ and $|Y_i| = k$ (power of set Y_i equals k).

Card 1/2

L 26048-65

ACCESSION NR: AT5001700

The problem is considered solved when a disjunction of normal form of the Boolean function $\varphi(X)$ is obtained where

$$\varphi(X) = \bigwedge_{i=1}^{m} f_i(Y_i). \qquad (2)$$

The presentation of an algorithm to solution of this problem is accompanied by the solution of a specific system of 12 equations, each of which depends on 4 variables, and their union of 16. Four theorems are proven. Orig. art. has: 5 tables and 5 formulas.

ASSOCIATION: Institut problem peredachi informatsii AN SSSR (Information transfer problems institute, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: MA, DP

NO REF SOV: 000 OTHER: 001

Card 2/2

KLYUSHNIKOV, M.N.; ZAKREVSKIY, D.V.; PELESHENKO, V.I.

Find of Lower Cretaceous contirental sediments in the southern slope of the Ukrainian Crystalline Shield. Biul. MOIP. Otd. geol. 39 no.4:76-79 Jl-Ag '64. (MIRA 17:10)

ZAKREVSKIY, D.V. [Zakreve'kyi, D.V.]; FAYBISHENKO, I.Ya.[Faybyshenko, I.IA.]

Hydrochemical characteristics of ground waters in the alluvium of the Kanev region. Nauk.zap.Kyiv.un. 16 no.14:209-212 '57. (MIRA 13:4)

(Kanev region--Water, Underground)

ZAKREVSKIY, G.P., inzh.-mekhanik

Improvement of the flowsheet for the cleaning of unbleached woodpulp. Bum.prom. [38] no.7:18-20 Jl '63. (MIRA 16:8)

1. Sovet narodnogo khozyaystva Litovskoy SSR.
(Woodpulp)

ZAKREVSKIY, G.P.; OVCHINNIKOV, B.A.

Manufacture of machine parts from capron. Bum.prom. 38 no.4:21-23 Ap '63. (MIRA 16:5)

1. Sovet narodnogo khozyaystva Litovskoy SSR.
(Lithuania--Machinery industry) (Nylon)

ZAKREVSKIY, G.S.

3616. Organi Zatisiya Raboty Kontyeynyernogo Punkta Opyt Stantsii Khar'kov-Balash Ovskiy M., Transzhye-Lborizdat, 1954. 75s. SILL. 20sm 5,000ekz 1P 20k-(54-57921) P 656. 225 st+ 625.243.5

SO: Knizhnaya Letopis', Vol. 3, 1955

RURA, V.Ye.; ZAKREVSKIY, L.K.

A case of extensive resection of the large and small intestines after gastric resection. Sov.med. 19 no.4:80-81 Ap '55. (MLRA 8:6)

1. Iz khirurgicheskogo otdeleniya (zav. -V.Ye.Rura) Velikolukskoy oblastnoy bol'nitsy.

(INTESTINES, surg.,
resection of small & large intestines after gastric resection)
(STOMACH, surg.,
resection, with resection of large & small intestines)

RURUA, V.Ye., ZAKREVSKIY, L.K.

Late results of extensive resection of large and small intestines after gastrectomy. Vest.khir. 75 no.4:130-131 My '55. (MLRA 8:8)

1. Iz khirurgicheskogo otdeleniya (zav.-V.Ye.Rurua) Velikolukskoy oblastnoy bol'nitsy. Velikiye Luki, ul. Karla Marksa, Dom spetsialistov, kv. 6.

(INTESTINAL OBSTRUCTION, surgery,
extensive resection of intestines, large & small, four years after gastrectomy)
(INTESTINE, SMALL, surgery,
extensive resection in intestinal obstruct., after previous gastrectomy)
(INTESTINE, LARGE, surgery,
extensive resection in intestinal obstruct., after previous gastrectomy)

48. **Refrigerated Bone Homografts From Tibia and Fibula of Cadavers Recommended For Clinical Use**

"Fixation of Spine by Use of Homografts Preserved at Low Temperature," by L. K. Zakrevskiy, State Scientific Research Children's Orthopedic Institute imeni G. I. Turner (director, Prof M. N. Goncharova), Ortopediya, Travmatologiya, i Protezirovaniya, Vol 2, Mar/Apr 57, pp 20-24

Experimental tests with homografts preserved at low temperature were carried out on 87 rabbits for periods up to a year, and this same method was applied to children. Homografts were prepared at the Leningrad Institute for Blood Transfusion by Yu. I. Barkov, who prepared them from the tibia and fibula of bodies 2-4 hours after death. These homografts were then preserved in glass ampules at -15 to -25°C.

Systematic X-ray and histological studies of the condition of homografts after 7-10 days' preservation revealed no essential changes of any biological or physical properties of the bones. Studies of the transplants and of the condition of the spine proved that the result of transplantation by this method was similar to that of autotransplantation.

The author concludes that although autotransplants healed faster, homotransplants are recommended for clinical use because the latter decrease operative trauma, shorten the period of operation, and make it possible to use grafts of the necessary size and shape. (U)

Sum 1434

ZAKREVSKIY, L.K.

Changes in autografts and refrigerated bone isografts used for fixing the spine. Vest.khir. 78 no.4:92-93 Ap '57. (MLRA 10:9)

1. Iz detskogo nauchno-issledovatel'skogo instituta im. G.I. Turnera (dir. - prof. M.M.Goncharova). Adres avtora: Leningrad, Lakhtinskaya ul., d.10/12, Institut im. G.I.Turnera.
(SPINE, surgery,
auto-grafts & preserved homografts (Rus))

ZAKREVSKIY, L.K.

Results of preoperative correction in scoliosis. Ortop. travm. i protez. 19 no.4:11-13 Jl-Ag '58 (MIRA 11:11)

1. Iz Nauchno-issledovatel'skogo detskogo ortopedicheskogo instituta imeni G.I. Turnera (dir. - prof. M.N. Goncharova).
(SCOLIOSIS, SURG.
preop. correction, results (Rus))

ZAKREVSKIY, L.K., kand.med.nauk

Transformation of the graft in a roentgenological picture during osteoplastic fixation of the spine. Vest.rent. i rad. 34 no.4: 80-81 Jl-Ag '59. (MIRA 12:12)

1. Iz Leningradskogo nauchno-issledovatel'skogo detskogo ortopedicheskogo instituta imeni G.I. Turnera (dir. - doktor med.nauk prof. M.N. Goncharova).
(SPINE surg.)

ZAKREVSKIJ, L.K.

On fixation of the spine with a homograft. Acta chir. orthop. traum. cech. 29 no.4:372-374 Ag '62.

1. Statni vedeckovyzkumny detsky ortopedicky Turneruv ustav v Leningrade, reditel profesorka M.N. Goncarova.
(SCOLIOSIS) (SPINE) (BONE TRANSPLANTATION)

SADOF'YEVA, W.I.; ZAKREVSKIY, K.K.; LASKOV, I.S.; SINITSKIY, Yu.F.

Method of X-ray determination and operative correction of the frontal inclination of the acetabulum in congenital dislocation of the hip. Ortop., travm. i protez. 26 no.9:3-7 S '65. (MIRA 18:10)

1. Iz Detskogo ortopedicheskogo instituta imeni G.I. Turnera (direktor - prof. M.N. Goncharova) Adres avtorov: Leningrad, F-136, Lakhtinskaya ul. d. 10-12, Institut imeni G.I. Turnera.

ZAKREVSKIY, L.K., starshiy nauchnyy sotrudnik (Leningrad M-190, Novo-Izmaylovskiy prospekt)

Course of idiopathic scoliosis in children. Ortop., travm. i protez. 25 no.5:31-33 My '64. (MIRA 18:4)

1. Iz Detskogo ortopedicheskogo instituta imeni Turnera, Leningrad.

LAKREVSKIY, L.K., starshiy nauchnyy sotrudnik

Stage resection and reposition in congenital hip dislocation. Ortop. travm. i protez. 24 no.2:33-38 '63. (MIRA 16:10)

1. Iz Leningradskogo detskogo ortopedicheskogo instituta imeni G.I.Turnera (dir. - prof. M.N.Goncharova). Adres avtora: Leningrad P-136, Lakhtinskaya ul. d. 10/12, Detskiy ortopedicheskiy institut.

(HIP-JOINT — DISLOCATION) (HIP-JOINT — SURGERY)

YAROSHEVSKAYA, Ye.N.; ZAKREVSKIY, L.K.

Comparative histological investigations on auto- and homografts in spinal fixation. Ortop.travm.i protez. 21 no.2:39-45 F '60. (MIRA 13:12)

(SPINE—SURGERY) (BONE GRAFTING)

LYANDRES, Z.A., prof.; BORTFEL'D, S.A., starshiy nauchnyy sotrudnik; GOLOVINSKAYA, N.V., starshiy nauchnyy sotrudnik; ZAKREVSKIY, L.Z., starshiy nauchnyy sotrudnik; ZAYDEL', O.P., nauchnyy sotrudnik; MANUKHINA, Z.P., nauchnyy sotrudnik; BOYKOVA, O.S., nauchnyy sotrudnik

Concepts of the abnormalities of posture and scoliosis in children. Ortop., travm. i protez. 25 no.11:81-85 N '64. (MIRA 18:11)

1. Iz Detskogo ortopedicheskogo Instituta imeni G.I. Turnera (dir. - prof. M.N. Goncharova), Leningrad. Adres avtorov: Leningrad M-136, Lakhtinskaya ul., d.10/12, Detskiy ortopedicheskiy institut Turnera. Submitted January 27, 1964.

[illegible]ANDRO, Ye.(g.Smela, Cherkasskoy obl.); ZALESNYSKIY, N. (g.Smela, Cherkasskoy obl.)

Rotary antenna assembly. Radio no.9:31-32 S '61. (MIRA 14:10)

(Radio—Antennas)

ZAKREVSKIY, P.O., kandidat voyennykh nauk, gvardii, podpolkovnik.

Fighter plane attacks of bombers on approaching courses. Vest. Vozd.Fl. 38 no.3:11-18 Mr '56. (MLRA 9:8)
(Air warfare)

ZAKREVSKIY, P.P., polkovnik, kand.voyennykh nauk

Searching for an aerial target. Vest. Vozd. Fl. no.10:54-56 O '61. (MIRA 15:2)

(Air warfare)

AID P - 4590

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 2/23

Author : Zakrevskiy, P. P., Guards Lt. Col., Bach. of Milit. Sci.

Title : Attack of bombers by fighters on encountering courses

Periodical : Vest. vozd. flota, 3, 11-18, Mr 1956

Abstract : Various methods of attacks by fighters from the front quarters against bombers are discussed in detail. Four sketches. Article is of some interest.

Institution : None

Submitted : No date

L 46275-66 EWT(d)/FSS-2/EWT(m)/EWP(h)
ACC NR: AP6009318 SOURCE CODE: UR/0256/65/000/009/0037/0041

AUTHOR: Demchev, I. R. (Colonel); Zakrevskiy, P. P. (Colonel)

57
B

ORG: None

TITLE: Effect of time factor on interception of air targets

SOURCE: Vestnik protivovozdushnoy oborony, no. 9, 1965, 37-41

TOPIC TAGS: air defense tactic, air to air attack, interceptor aircraft, jet fighter aircraft, supersonic aircraft

ABSTRACT: The art of operating fighter aircraft in an air defense system is discussed from the standpoint of using supersonic fighter airplanes for interception of targets also flying at supersonic speed. The effect of high speed and a short time on the development of a defensive operation is considered and the tactical maneuvering in defending a target area is outlined. The line of interception is defined and its location with respect to the target area and the airfield is graphically illustrated. Then, the distance from the airfield to the interception line is formulated by taking into account the approach of the flying target, the time needed for defensive operation and the speeds of the fighter and of the flying target. The importance of time factors for the success of interception under present conditions is stressed. Some practical examples are presented and compared with the conditions that existed at the end of the Second World War. It is stressed that under present conditions, a high standard of proficiency and an efficient coordination of actions must be demonstrated by all members of antiaircraft defense groups.

Card 1/2

L 46275-66
ACC NR: AP6009318

The pilots and other members involved in accomplishment of the interception mission must be well trained in coordinating elements assigned to each individual operating function. In this connection, a notion of optimal combat interception time is introduced and its determination is discussed for attacking conditions shown in a diagram. The time to be determined covers the identification of the flying target, the correction of initial direction error, aiming at the target and the firing of rocket missiles. The visual and radar identification procedure is explained and an estimated average time of 15 to 20 seconds is mentioned. A formula for calculating the time needed for correction of direction error is derived by using the ratio between the azimuth angle and the fighter angular velocity. It is estimated that the time needed for aiming at the target does not exceed 10 to 15 seconds. The time needed for firing depends upon the number and types of missiles to be fired. The selection of a proper firing range is briefly discussed. Orig. art. has: 2 diagrams and 2 photos.

SUB CODE: 01, 15/ SUBM DATE: None

Card 2/2 mt

BRODIN, M.S.; VATULEV, V.N. [Vatul'ov, V.M.]; ZAKREVSKIY, S.V. [Zakrevs'kyi, S.V.]

Luminescence induced by the action of a beam from a ruby laser on sodium uranylacetate crystals. Ukr. fiz. zhur. 9 no.10:1150-1151 O '64 (MIRA 18:1)

1. Institut fiziki AN UkrSSR, Kiyev.

BRODIN, M.S.; VATULEV, V.N.; ZAKREVSKIY, S.V.

Effect of intense laser radiation on the dispersive properties of "transparent" crystals. Pis'. v red. Zhur. eksper. i teoret. fiz. 2 no. 7:317-320 O '65. (MIRA 18:12)

1. Institut fiziki AN UkrSSR, Kiyev. Submitted July 28, 1965.

L 6494-66 EWA(k)/FBD/EWT(1)/EWT(m)/EWA(h)/T/EWP(t)/EWP(b)/EWA(m)-2/EWP(k)/
ACC NR: AP5027992 EEC(k)-2 SOURCE CODE: UR/0386/65/002/007/0317/0320
SCTB/IJP(c) WG/JD/GG

AUTHOR: Brodin, M. S.; Vatulev, V. N.; Zakrevskiy, S. V. 44,55 44,55 44,55

ORG: Institute of Physics, Academy of Sciences UkrSSR, Kiev (Institut fiziki Akademii nauk Ukrainskoy SSR) 44,55

TITLE: The effect of intense laser radiation on the dispersive properties of "transparent" crystals 25,44 21,44,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. (Prilozheniye), v. 2, no. 7, 1965, 317-320, and insert facing page 316

TOPIC TAGS: light dispersion, laser effect, thermal optic effect, light interference, cadmium sulfide, zinc sulfide, semiconductor 27 27

ABSTRACT: The authors have observed changes induced in the dispersive properties of some semiconductor crystals which are transparent in the ruby-laser radiation range, at the instant of a laser pulse. These changes are important in studies of the conditions for self-trapping of a laser beam, for the generation of harmonics by different means, and for similar phenomena. The spectra were obtained with an ISSh-500 flash lamp with flash duration time of 2—3 μsec.

Card 1/3

A delay circuit made it possible to photograph the spectrum during different instants of the laser pulse (~400 μsec long and with energy 1.5 J). CdS crystals in the form of thin strips were fastened on a glass base. Besides the absorption edge, it was possible to distinguish on the spectrograms obtained at room temperature also the interference pattern due to multiple reflection. By photographing the spectrum at the instant the laser pulse is applied with the laser beam partially focused, small but distinct shifts of the interference fringes towards the longer wavelengths was observed. These shifts corresponded to an approximate average increase of ~0.01 in the refractive index. Sharper focusing (spot diameter smaller than 1 mm) damages the irradiated section of the crystal. A small shift of the interference pattern was observed also in the crystal regions adjacent to the irradiated section. Preliminary observations carried out on some ZnS samples have shown an equally noticeable shift. While the mechanism of the observed changes in the dispersion and absorption properties is not yet clear, it is suggested that the changes pertaining directly to the irradiated section of the crystal can be connected with the action of the electric field of the light wave, and also with some heating of the crystal. It is less probable that the observed shift is due to the influence of the elastic waves that may be produced. The situation is even less clear with respect to the changes in the non-irradiated section of the crystal. A final clarification of the mechanism of the described phenomena calls for further

L 6494-66
ACC NR: AP5027992 O

research. The effect of local and over-all heating of the crystal is discussed briefly. Orig. art. has: 1 figure.

SUB CODE: OP, SS/ SUBM DATE: 28Jul65/ ORIG REF: 001/ OTH REF: 003/
ATD PRESS: 4140

nw
Card 3/3

L 01058-67 EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(t)/ETI/EWP(k) IJP(c) AT/WH/WG/

ACC NR: AT6015132 GD/JD SOURCE CODE: UR/0000/66/000/000/0077/0090

AUTHOR: Brodin, M. S.; Vatulev, V. N.; Zakrevskiy, S. V.; Kamuz, A. M.

ORG: Institute of Physics, AN UkrSSR (Institut fiziki AN UkrSSR)

TITLE: Some effects of the interaction between a ruby-laser beam and transparent crystals

SOURCE: Respublikanskiy seminar po kvantovoy elektronike. Kvantovaya elektronika (Quantum electronics); trudy seminara. Kiev, Naukova dumka, 1966, 77-90

TOPIC TAGS: laser, ruby laser, solid state laser

ABSTRACT: The two-photon effects in some crystals and the effect of a laser beam on crystal dispersion were studied by the authors for some time. The mechanism of crystal destruction in some experiments could not be explained by simple heating. Additional experiments intended to clarify some points are described in the present article. A ruby crystal 12-cm long 12-mm diameter, a polished-tin reflector, and an IFP-2000 flashtube were used in the test laser. The radiation spectrum of anthracene powder served to verify the intensity of the laser beam and the method of

Card 1/2

L 01058-67

ACC NR: AT6015132

spectrum recording. Both structured and structureless radiation spectra were observed in sodium-uranyl-acetate crystals; dimples, pinholes, and small cracks were formed in the crystals under the influence of the focused laser beam. The effects of a concentrated beam upon dispersion and fundamental-absorption-edge position were studied on ZnS and CdS crystals. It was found that a nonfocused laser beam did not affect the spectrum; a sharp-focused beam caused a long-wave displacement of all visible interference lines and absorption edge; various interpretations are discussed. Samples of anthracene, NaCl, KCl, KBr, and plexiglas were tested for destruction by sharp-focused laser pulses. The mechanism of destruction was found to be complex, dependent on the properties of the specimen, and resembling application of large local mechanical forces. Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 12Feb66 / ORIG REF: 008 / OTH REF: 016

awm
Card 2/2

L 04614-67 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6033574 SOURCE CODE: UR/0181/66/008/010/3084/3086

AUTHOR: Brodin, M. S.; Vitrikhovskiy, N. I.; Zakrevskiy, S. V.; Reznichenko, V. Ya.

ORG: Institute of Physics, AN UkrSSR (Institut fiziki AN UkrSSR); Institute of Semiconductors, AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR)

64
B

TITLE: Generation of compound CdS_x—$CdSe_{1-x}$ crystals excited by a ruby laser

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 3084-3086

TOPIC TAGS: solid state laser, semiconductor laser, cadmium sulfide, cadmium selenide, mixed semiconductor, luminescent crystal, stimulated emission

ABSTRACT: The present work is a continuation and expansion of an earlier study (UFZh, 11, 344, 1966) on the luminescence and generation of CdS—CdSe crystals excited by a two-photon ruby laser. The following CdS_x—$CdSe_{1-x}$ crystal compositions with the corresponding forbidden band ΔE were studied: 84—16% (ΔE ≈ 2.44 ev); 76—24% (ΔE ≈ 2.38 ev); 72—28% (ΔE ≈ 2.34 ev); 63—37% (ΔE ≈ 2.28 ev); and 42—58% (ΔE ≈ 2.12 ev); 38—62% (ΔE ≈ 2.09 ev); and 28—72% (ΔE ≈ 2.01 ev). All values of ΔE are given for T = 77K. All specimens were cut in the form of rectangular parallelepipeds or wedges with highly polished ends to form a plane resonator. The resonator length varied from 1 to 6 mm. The N-cooled specimens were pumped by a Q-switched ruby laser at power densities of 10—150 Mw/cm^2 and by a mercury lamp. Experimental data indicate that generation can be achieved in CdS_x—$CdSe_{1-x}$ crystals

Card 1/2

L 04614-67

ACC NR: AP6033574

(with x varied over a wide range) pumped by a ruby laser over a range from 4960 to 6800 Å. The experimentally observed polarization of the luminescence band and its width and frequency suggest the exciton nature of the stimulated emission. The generation line shift may be emitted by optical phonons. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 28Mar66/ ORIG REF: 008/ OTH REF: 001/ ATD PRESS: 5100

Card 2/2 LC

ZAKREVSKIY, T.

Local road surfacing from granulated blast-furnace slag. Avt. dor. 27 no. 3:12 Mr '64. (MIRA 17:5)

1. Nachal'nik Sumskogo obldorupravleniya.

ZAKRIVIDOROGA, S.P.; ZAKRIVIDOROGA, Z.S.; LYUBOVSKAYA, P.I.; ROKHLENKO, S Z.

Intensity of oxygen consumption by myeloid tissue in some mental diseases. Zhur.nevr. i psikh. 63 no.12:1853-1855 '63.

(MIRA 18:1)

1. Kafedra psikhiatrii i kafedra farmakologii (zav. - prof. S.P. Zakrividoroga) Chernovitskogo meditsinskogo instituta i Chernovitskaya psikhonevrologicheskaya bol'nitsa.

ZAKRIVIDOROGA, S.P. [Zakryvydoroha, S.P.]

Some characteristics of Korean popular medicine and medical remedies. Report No.2: Medicinal materials of vegetable origin. Farmatsev. zhur. 16 no.4:42-48 '61.

(MIRA 17:6)

1. Kafedra farmakologii Chernovitskogo meditsinskogo instituta.

ZAKRIVIDOROGA, S.P. [Zakryvydoroha, S.P.]; ZAMANSKIY, L.N. [Zamans'ky, L.N.]; LOPUSHANSKIY, A.I. [Lopushans'kyi, A.I.]; NEVSKAYA, T.L. [Nevs'ka, T.L.]; TARAKHOVSKIY, M.L. [Tarakhovs'kyi, M.L.]

Effect of bromine on the processes of exhaustion and recovery of the body. Fiziol. zhur. [Ukr.] 8 no.3:319-326 My-Je '62. (MIRA 15:6)

1. Kafedra farmakologii i biokhimii Chernovitskogo meditsinskogo instituta.

(BROMINE--PHYSIOLOGICAL EFFECT)
(PHYSIOLOGY, EXPERIMENTAL)

ZAKRIVIDOROGA, S.P.; LIPSITS, D.V.; POLOTAY, V.A.; RED'KO, G.F.; TARAKHOVSKIY, M.L.

Effect of warty potatoes on animal organisms. Vop.pit. 19 no.4: 82-83 Jl-Ag '60. (MIRA 13:11)

1. Iz laboratorii (zav. - kand.biolog.nauk D.V. Lipsits) Vsesoyuznoy nauchno-issledovatel'skoy stantsii po raku kartofelya (Chernovitsy) i kafedr farmakologii (zav. - prof. S.P. Zakrividoroga) i gistologii (zav. - dotsent I.A. Shevchuk) Chernovskogo meditsinskogo instituta.

(POTATOES)

ZAKRIVIDOROGA, S.P., prof.

Dependence of the force and duration of anesthetic sleep induced by hexenal-novocaine upon the quantitative relationship and the order of administration of the substances. Khirurgiia 37 no.4:87-92 '61. (MIRA 14:4)

1. Iz kafedry farmakologii (zav. - prof. S.P. Zakrividoroga) Chernovitskogo meditsinskogo instituta.
(HEXOBARBITAL) (NOVOCAINE) (ANESTHESIA)

ZAKRIVIDOROGA, Stepan Petrovich

Materials for Pharmadynamics Barbiturates and Questions of Mixed and Combined Actions of them with Several Substances

Dissertation for Doctor's degree of Medical Science. Saratov Medical Institute, 1945

NORTH KOREA/Pharmacology - Toxicology - Various Preparations. V

Abs Jour : Ref Zhur Biol., No 4, 1959, 18747

Author : Zakrividoroga, S.P.
Inst : -
Title : Effectiveness of Treatment with Turpentine of Experimental Thermal and Chemical Burns in Animals.

Orig Pub : Choson Ykkhak, Koreysk. meditsina, 1958, 5, No 2, 49-53

Abstract : No abstract.

Card 1/1

ZAKRIVODOROGA, S.P., prof.

Some characteristic features of Korean medicine and of the eminent physician Li Che Ma. Vrach.delo no.8:881-882 Ag '59. (MIRA 12:12)

1. Kafedra farmakologii (zav. - prof. S.P. Zakrivodoroga) Chernovitskogo meditsinskogo instituta.
(MEDICINE, KOREAN) (LI CHE MA, 1837-1901)

ZAKRIVIDOROGA, S.P., prof.; ZAMANSKIY, L.N., dotsent

Effect of quinacrine on the concentration and distribution of radioisotopes in rabbit organs and tissues. Farm. i toks. 22 no.2:158-163 Mr-Ap '59. (MIRA 12:6)

1. Kafedra farmakologii (zav. - prof. S.P.Zakrividoroga) i biokhimii (zav. - dotsent L.N.Zamanskiy) Chernovitskogo meditsinskogo instituta.

(QUINACRINE, eff.
on radiophosphorus & radiosulfur metab. in rabbits (Rus))
(SULFUR, radioactive,
metab., eff. of quinacrine in rabbits (Rus))
(PHOSPHORUS, radioactive,
same)

ZAKRIVIDOROGA, S.P.; ZAMANSKIY, L.N.; LOPUSHANSKIY, A.I.; NEVSKAYA, T.L.

Effect of penicillin on the dynamics of emaciation and recovery of the organism. Antibiotiki 3 no.2:45-51 Mr-Ap '58. (MIRA 12:11)

1. Kafedry farmakologii i biologicheskoy khimii Chernovitskogo meditsinskogo instituta.

(DEFICIENCY DISEASES, experimental,
emaciation, eff. of penicillin in rabbits (Rus))
(PENICILLIN, effects,
on exper. emaciation in rabbits (Rus))

ZAKRIVIDOROGA, Z.S.

SHUL'MAN, A.A.; ZAKRIVIDOROGA, Z.S.

Oil from linden seeds. Vrach.delo no.1:93 Ja '58. (MIRA 11:3)

1. Kafedra farmakologii (zav.-prof. S.P.Zakrividoroga) Chernovitskogo meditsinskogo instituta.
(LINDEN OIL)

ZAKRIVIDOROGA, S.P.; ZAKRIVIDOROGA, Z.S.; LIPSITS, D.V.; LYUBOVSKAYA, P.I.; POLOTAY, V.A.; TARAKHOVSKIY, M.L.; FASTOVSKIY, V.L.

Toxicity for animals of the cancerous potato. Vop. pit. 21 no.5: 58-66 S-O '62. (MIRA 17:5)

1. Iz laboratorii biokhimii Vsesoyuznoy nauchno-issledovatel'skoy stantsii po paku kartofelya i kafedr farmakologii, patofiziologii, patoanatomii i gistologii meditsinskogo instituta, Chernovtsy.

ZAKRIVIDOROGA, Z.S.

Material on the problem of nervous regulation of immunological reactions. Zhur.mikrobiol.epid.i immun. 32 no.1:14-17 Ja '61. (MIRA 14:6)

1. Iz Chernovitskogo meditsinskogo instituta.
(NERVOUS SYSTEM, AUTONOMIC) (IMMUNITY)

ZAKRIVIDOROGA, S.F.; ZAKRIVIDOROGA, Z.S.; LYUBOVSKAYA, P.I.; ROKHLENKO, S.Z.

Intensity of oxygen consumption by myeloid tissue in some mental diseases. Zhur.nevr. i psikh. 63 no.12:1853-1855 '63.
(MIRA 18:1)

1. Kafedra psikhiatrii i kafedra farmakologii (zav. -- prof. S.P. Zakrividoroga) Chernovitskogo meditsinskogo instituta i Chernovitskaya psikhonevrologicheskaya bol'nitsa.

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(TERRAMYCIN)
(BRAIN)
(BLOOD)

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DLC: TS227.Z25

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How to prevent damages of boilers of VP-1 and VP-2 type locomotives. Besop.truda v prom. 1 no.7:16 Jl '57. (MLRA 10:7)

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ZAKROCHINSKIY, S.V.

Improving end switches of crane moving mechanisms. Bezop. truda v prom. 2 no.2:33-34 F '58. (MIRA 11:2)

1. Upravleniye Sverdlovskogo okruga Gosgortekhnadzora SSSR.
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ZAKROCHINSKIY, S. V., inzh.; SOSKIN, M. D., inzh.

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Bezop. truda v prom. 5 no.11:18-19 N '61. (MIRA 14:11)
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ZAKROCHENSKIY, S.V., inzh.; SHALAYEV, N.B., inzh.

Secure safe operation of waterheaters. *Bezop.truda v prom.* 6 no.4:17-19 Ap '62. (MIRA 15:5)

1. Upravleniye Sverdlovskogo okruga Gosudarstvennogo komiteta pri Sovete Ministrov RSFSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru (for Zakrochinskiy). 2. Ural'skiy politekhnicheskiy institut (for Shalayev).
(Waterheaters--Safety measures)

ZAKROCHINSKIY, Stepan Vasil'yevich; SOSKIN, Mendel' Davidovich; SOSKINA, I.M., red.; SHKLOVSKAYA, I.Yu., red.izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

[Reference materials on boiler inspection] Rukovodiashchie materialy po kotlonadzoru. Izd.2., perer. i dop. Moskva, Metallurgizdat, 1963. 823 p. (MIRA 17:1)

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[Regulations on boiler maintenance] Rukovodiashchie materialy po kotlonadzoru. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Sverdlovskoe otd-nie, 1959. 813 p. (MIRA 14:1)

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ZAKROCKI, Z.

TECHNOLOGY

PERIODICAL: NAFTA, Vol.14,no. 9, Sept. 1958.

ZAKROCKI, Z. The production of radioactive sand. p. 239.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 4
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Uncl.

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D003/D101

18.8310

AUTHOR: Zakrocki, Zbigniew, Engineer

TITLE: Use of radioisotopes for corrosion testing of pipelines and storage tanks

PERIODICAL: Nafta, no. 7, 1960, 5 (of supplement)

TEXT: The author describes experimental thickness tests with the use of backscattered radiation performed at the Instytut Naftowy (Petroleum Institute) as a technique thought feasible in externally measuring the wall thickness of steel pipes and thus checking corrosion. Equipment used in the test was a Co-60 radiation source of 6 mC, a measuring assembly "Integrator" type 1/58 built by the Zakład Fizyki Ogólnej AGH (Department of General Physics, Academy of Mining and Metallurgy), BAS-7 and GAS-10 geiger counters and plate samples of 3 and 24 mm thickness. Optimum ratio of background to backscattered radiation for a 24 mm thick plate was obtained at a source-to-sample distance of 0.6 cm, source-to-counter distance (both in heavy lead shield) of 130 mm and an irradiation angle of 72°, when the

Card 1/2

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Use of radioisotopes...

backscattered record was 55 counts per second against a background of 250 counts per second. The counts per second difference for a 3 mm plate was negligible and lay within the error margin. The test is mentioned to be a first step towards further research on corrosion tests in pipelines and tanks. There are 4 figures.

Card 2/2

ZAKROVRYASHIN, I.I., inzh.

New coal region in the Donets Basin. Shakht. stroi. 7 no.3: 32 , p.3 of cover Mr'63 (MIRA 17:7)